

REMARKS

Claims 1, 3, 4, 12, 14, 16, 18, 20, 22 and 23 are presented for consideration, with Claim 1 being independent.

Claim 1 has been amended to further distinguish Applicants' invention from the cited art. In addition, selected claims have been amended, and Claims 22 and 23 have been added to provide an additional scope of protection. Claims 6, 7, 9, 10, 13, 15, 17, 19 and 21 have been cancelled.

Claims 1 and 12 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Bassetti '602 in view of Ikarashi '036. Claims 3, 7, 9 and 13 are rejected as allegedly being obvious over those citations and further in view of Okuno '745. Claims 4 and 6 are rejected as allegedly being obvious over Bassetti, Ikarashi and Fujii '588. The remaining claims stand rejected as allegedly being obvious over Bassetti and Ikarashi in further combination with Okuno and Fujii (Claim 10), Suzuki '416 (Claims 14, 16 and 18), Okuno and Suzuki (Claims 15, 17 and 19), Yoshioka '541 (Claim 20) or Okuno and Yoshioka (Claim 21).

The rejections as applied to Claims 6, 7, 9, 10, 13, 15, 17, 19 and 21 are deemed to be moot in view of the cancellation of these claims. The remaining rejections are respectfully traversed.

Claim 1 of Applicants' invention relates to an image forming apparatus including a plurality of electron-emitting devices wired in a matrix and fluorescent substances for emitting light by electrons emitted by the electron-emitting devices. The apparatus includes a circuit configured to output an image signal, based on an input image signal, wherein a frame rate

of an image formed by the image signal is higher than a frame rate of the input image signal. The image signal output by the circuit satisfies the conditions of x being a normalized driving time period normalized to a maximum time period, during which time the fluorescent substances are continuously irradiated with electrons emitted from the electron-emitting devices driven by the image signal output from the circuit, y being a normalized luminance normalized to an amount of light emitted by the fluorescent substances, resulting from irradiation by electrons emitted from the electron-emitting devices in the maximum time period, in a graph whose abscissa x and ordinate y , a plurality of normalized luminance which are measured at a plurality of driving time periods, each of which has equal time intervals less than 5.s are plotted on the graph, wherein the plurality of driving time periods do not include $x=0$ and $x=1$, with normalized luminance not falling within a range defined by lines $y=x$ and $y=x^{0.8}$ on the graph, wherein the range includes a border, are 4/15 or less of the plurality of normalized luminance. The image forming apparatus also includes a plurality of memories, each of which is configured to store a part of the image signals of one line of the image, and a controller configured to control reading of the image signals from the plurality of memories.

Support for the amendments to Claim 1 can be found, for example, in Figure 8 and the corresponding specification on pages 35, line 6, *et. seq.*

The primary citation to Bassetti relates to a method of gray scale shading on a digitally commanded display. The Office Action asserts that Bassetti includes an electron-emitting device having frame rate conversion means for converting a frame rate of an input image signal.

The secondary citation to Ikarashi relates to a drive circuit for an EL display device and is relied upon for its teaching of converting a frame rate of an input signal so that a luminance characteristic of the fluorescent depending on an electron irradiation time for the fluorescent substances has a linearity.

Without conceding the propriety of combining Bassetti and Ikarashi in the manner proposed in the Office Action, such a combination fails to teach or suggest a number of the feature set forth in Claim 1, such as a circuit configured to output an image signal, with the circuit satisfying the conditions as set forth in Applicants' claimed invention. Therefore, reconsideration and withdrawal of the rejection of Claims 1 and 12 under 35 U.S.C. §103 is respectfully requested.

The tertiary citation to Okuno relates to a display system and was relied upon for its teaching of converting an interlaced format into a non-interlaced format.

The tertiary citation to Fujii relates to an EL display device and was cited for its teaching of performing pulse width modulation.

The tertiary citation to Suzuki relates to an electron-emitting display device and is relied upon for its teaching of applying 10KV to an electrode.

The tertiary citation to Yoshioka relates to an image forming apparatus and was cited for its teaching of arranging a plurality of electron-emitting devices and fluorescent substances apart from each other.

The tertiary citations as a whole, however, fail to compensate for the deficiencies in Bassetti and Ikarashi as discussed above with respect to independent Claim 1. Therefore, even assuming, *arguendo*, the art could have been combined in the manner proposed in the Office Action, such combinations still fail to teach or suggest Applicants' claimed invention. Therefore, reconsideration and withdrawal of the remaining rejections under 35 U.S.C. §103 are respectfully requested.

Accordingly, it is submitted that Applicants' invention as set forth in independent Claim 1 is patentable over the cited art. In addition, dependent Claims 3, 4, 12, 14, 16, 18, 20, 22 and 23 set forth additional features of Applicants' invention. Independent consideration of the dependent claims is respectfully requested.

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In compliance with the duty of disclosure under 37 C.F.R. §1.56 and in accordance with the practice under 37 C.F.R. §§1.97 and 1.98, the Examiner's attention is directed to the document listed on the enclosed Form PTO-1449.

It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

CONCLUSION

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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